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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,957	10/28/2003	Hidekazu Kobayashi	117560	3775
25944	7590	01/11/2006	EXAMINER	
OLIFF & BERRIDGE, PLC			QUARTERMAN, KEVIN J	
P.O. BOX 19928				
ALEXANDRIA, VA 22320			ART UNIT	PAPER NUMBER
			2879	

DATE MAILED: 01/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/693,957	KOBAYASHI	
	Examiner Kevin Quartermar	Art Unit 2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 03 November 2005.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 9-16 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-8 and 17-23 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 03 November 2005 is/are: a) accepted or b) objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1105.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant's amendment and remarks received 03 November 2005 have been entered.

### ***Drawings***

2. The replacement-drawings were received on 03 November 2005. These drawings are acceptable.

### ***Specification***

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

4. The abstract of the disclosure is objected to because it exceeds 150 words in length. Correction is required. See MPEP § 608.01(b).

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-3, 5-8, 17-19, and 21-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Fukuoka (US 6,469,438).

7. Regarding independent claim 1, Figure 14 of Fukuoka shows a method of producing an electroluminescence apparatus comprising forming a plurality of light-emitting layers (30, 32, 34) that emit light with different colors; forming an electron injection layer containing a metal quinolinole complex (col. 14, ln. 53-60), such that the electron injection layer is in contact with at least one of the plurality of the light-emitting layers; and forming a layer (12) capable of reducing a metal in the metal quinolinole complex, such that the layer is in contact with the electron-emitting layer.

8. Regarding claim 2, Figure 14 of Fukuoka shows the layer capable of reducing the metal of the metal quinolinole complex being a cathode.

9. Regarding claim 3, Fukuoka discloses the layer capable of reducing the metal of the metal quinolinole complex containing at least a metal selected from a group consisting of Mg, Ca, and Al (col. 15, ln. 28-33).

10. Regarding claim 5, Figure 22 of Fukuoka shows the light-emitting layer being separated by a bank (18), and the electron-injection layer being formed by injecting a liquid material on the light-emitting layers surrounded by the banks (col. 31, ln. 4-13).

11. Regarding claim 6, Fukuoka discloses the metal quinolinole complex containing at least one metal element selected from group 1A of the periodic table, group 2A of the periodic table, and a rare earth element (col. 14, ln. 53-60).

12. Regarding claim 7, Fukuoka discloses the metal element being selected from Li, Na, K, Rb, Cs, Mg, Ca, Sr, Ba, La, Ce, Pr, Nd, Pm, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, and Lu (col. 14, ln. 53-60).

13. Regarding claim 8, Figure 14 of Fukuoka teaches forming a light-emitting layer that emits red light (34), forming a light-emitting layer that emits green light (32), and forming a light-emitting layer that emits blue light (30), and the electron injection layer containing the metal quinolinole complex being formed such that the electron injection layer is in contact only with the light-emitting layer that emits blue light.

14. Regarding independent claim 17, Figure 14 of Fukuoka shows a method of producing an electroluminescence apparatus comprising forming a light-emitting layer that emits red light (34); forming a light-emitting layer that emits green light (32); forming a light-emitting layer that emits blue light (30); and forming a layer (12) containing an organic metal compound to contact only the layer that emits blue light.

15. Regarding claim 18, Fukuoka discloses the organic metal compound containing a metal quinolinole complex (col. 14, ln. 53-60).

16. Regarding claim 19, Fukuoka discloses the layer capable of reducing the metal of the metal quinolinole complex containing at least a metal selected from a group consisting of Mg, Ca, and Al (col. 15, ln. 28-33).

17. Regarding claim 21, Figure 22 of Fukuoka shows the light-emitting layer being separated by a bank (18), and the electron-injection layer being formed by injecting a liquid material on the light-emitting layers surrounded by the banks (col. 31, ln. 4-13).

18. Regarding claim 22, Fukuoka discloses the metal quinolinole complex containing at least one metal element selected from group 1A of the periodic table, group 2A of the periodic table, and a rare earth element (col. 14, ln. 53-60).

19. Regarding claim 23, Fukuoka discloses the metal element being selected from Li, Na, K, Rb, Cs, Mg, Ca, Sr, Ba, La, Ce, Pr, Nd, Pm, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, and Lu (col. 14, ln. 53-60).

***Claim Rejections - 35 USC § 103***

20. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

21. Claims 4 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukuoka (US 6,469,438) in view of Kambe (US 6,821,649).

22. Regarding claims 4 and 20, Fukuoka teaches the limitations of independent claims 1 and 17 discussed earlier but fails to exemplify the electron injection layer being formed by using a liquid material as a solvent containing any one of alcohol, a ketone, an ether, an ester, and an amide.

23. Kambe teaches that it is known in the art to provide a method of producing an electroluminescence apparatus with a step of forming the electron injection layer by using a liquid material as a solvent containing any one of alcohol, a ketone, an ether, an ester, and an amide (claim 1) for ensuring high electron injection efficiency (col. 6, ln. 61-62).

24. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the method of producing an electroluminescence apparatus of Fukuoka with the step of forming the electron injection layer taught by Kambe for enhancing the electron injection efficiency of the device.

***Response to Arguments***

25. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

26. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

27. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Quarterman whose telephone number is (571) 272-2461. The examiner can normally be reached on M-TH (7-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin Quarterman  
Examiner  
Art Unit 2879

  
7 January 2006

  
Joseph Williams  
Examiner  
Art Unit 2879